

ABSTRACT

**METHOD AND APPARATUS FOR DETECTING, MONITORING, AND  
QUANTIFYING CHANGES IN A VISUAL IMAGE OVER TIME**

A method of quantifying measurements associated with a subject using a visual image of the subject includes acquiring digital representations of first and second images of the subject, determining difference information between the first and second images, and converting this information into physical, chemical, electrical, or electrochemical information concerning the subject. An apparatus for quantifying measurements associated with a subject using a visual image of the subject includes a digital camera and  
10 a computer. The camera acquires digital representations of first and second images of the subject. The computer is responsive to the digital representations and determines difference information between the first and second images. The difference information represents a change in a visual parameter between the first and second images. The computer converts the difference information into physical, chemical, electrical, or electrochemical information associated with the subject.